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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,250	07/15/2003	Hiroshi Teramachi	10116/10	8901

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EXAMINER

BALDWIN, KATHLEEN C

ART UNIT PAPER NUMBER

3682

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/620,250	Applicant(s) TERAMACHI, HIROSHI	
	Examiner Kathleen Baldwin	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/18/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/18/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Japanese Patent Number 2000-291653 is referenced in the specification and not on an information disclosure statement.

Drawings

Figure 25 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "thin" in claim 1 is a relative term which renders the claim indefinite.

The term "thin" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In claim 1, a "thin central plate portion" is claimed.

The term "precision" in claim 4 is a relative term which renders the claim indefinite. The term "precision" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In claim 4, "precision sheet steel" is claimed.

Claim 10 recites the limitation "said upper and lower track rails" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-7 rejected under 35 U.S.C. 102(b) as being anticipated by Teramachi et al. (US Patent Number 6,312,158).

With respect to claim 1, Teramachi ('158) discloses a roller guide apparatus (1) comprising a track rail with projected portions left and right (figure 1, 41 shown projecting left and right), and a movable block (3) having sets of endlessly circulating rolling member rows (5) that are in contact with the left and right projected portions of the track (column 2, lines 37-44). With respect to the elastically deformable claim limitation, the rail of Teramachi ('158) is inherently deformable due to the physical properties of the material.

With respect to claim 3, Teramachi ('158) discloses the track rail to be an integral structure by drawing.

With respect to claim 4, Teramachi ('158) discloses a circular arc shape of the track rail (column 2, lines 29-33; figure 1, 41).

With respect to claim 5, Teramachi ('158) discloses the track rails as being orthogonal to each other allowing the movable structure to move in two orthogonal directions (column 4, lines 5-14, figure 7).

With respect to claim 6, Teramachi ('158) discloses the track rail comprising a rectilinear rail. (column 5, lines 29-33).

With respect to claim 7, Teramachi ('158) discloses the track rail comprising a curvilinear rail (column 5, lines 29-33).

Claims 1,3, and 6-8 rejected under 35 U.S.C. 102(b) as being anticipated by Michioka et al.(US Patent Number 6,488,411).

With respect to claim 1, Michioka('411) discloses a roller guide apparatus (figure 3) comprising a track rail with projected portions left and right (41), and a movable block (4) having sets of endlessly circulating rolling member rows (51) that are in contact with the left and right projected portions of the track (column 14, lines 4-14). With respect to the elastically deformable claim limitation, the rail of Michioka ('411) is inherently deformable due to the physical properties of the material.

With respect to claim 3, Michioka ('411) discloses the track rail as an integral structure by drawing.

With respect to claim 6, Michioka ('411) discloses the track rail comprising a rectilinear rail (1A, column 3, lines 1-5)

With respect to claim 7, Michioka ('411) discloses the track rail comprising a curvilinear rail (1B, column 3, lines 1-5).

With respect to claim 8, Michioka ('411) discloses the rolling members having sets of endlessly circulating member rows that comprise of balls (3, column 14, lines 9-14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teramachi ('158) in view of Willard (US Patent Number 1,178,196).

Teramachi ('158) discloses a roller guide apparatus (1) as described above but does not disclose the track rail comprising two separate identical members welded together. Willard ('196) teaches a track comprising two duplicate sections of metal placed back-to-back and riveted together (column 1, lines 28-31). Willard ('196) also teaches that this produces a lighter weight track compared to a solid track of the same dimensions (column 2, lines 64-68). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to produce Teramachi's ('158) track by the following the teachings of Willard ('196) to decrease the weight of the track. With respect to the method of making limitation, the method by which a device is made is given minimal patentable weight within a device claim. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (MPEP 2113 R-1).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teramachi ('158) as applied to claims 1 and 4 above, and further in view of Chen (US Patent Number 6,109,789).

Teramachi ('158) discloses a roller guide apparatus (1) as described above. Teramachi ('158) does not disclose the roller guide apparatus comprising endlessly circulating rolling members located at an upper side and lower side of the projected portions of the track where the upper rolling members are rollers and the lower rolling members are balls. Chen ('789) discloses a linear slide that has rolling elements that include cylindrical roller trains (62), which are carried on the upper surface of the guide rail, and rolling ball trains (61) that are carried on the lateral surfaces of the guide rail. Chen ('789) teaches the service life of balls is shorter than that of rollers; rollers can also support more weight (column 1, lines 18-20 and 30-31). Chen ('789) teaches that by using a rolling ball train a high degree of precision can be maintained (column 1, 16-17).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Teramachi ('158) roller guide apparatus (1) by using rollers, along with the existing balls, to create a longer service life while maintaining precision of the movement as taught by Chen ('789).

Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Teramachi ('158) as applied to claim 1 and 5 above, and further in view of Yamagisawa (US Patent Number 6,327,929).

Teramachi ('158) discloses a roller guide apparatus (1) as described above. Teramachi does not disclose the apparatus being fixed to the center of mounting plates. Yamagisawa ('929) teaches that a two-dimensional drive system must consist of a mounting plate for the guides (column 2, lines 50-55). Yamagisawa ('929) teaches the mounting plate helps support the load applied to the moving block (32) and improves the positioning accuracy, the resolution, and high-speed ability of the unit (column 2, lines 41-45).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify Teramachi ('158) to be fixed to a mounting plate to produce greater stability and strength of the apparatus as taught by Yamagisawa ('929).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kondoh (US Patent Number 5,273,365) discloses a linear motion rolling guide unit that comprises rolling members of balls and rollers.

Conclusion

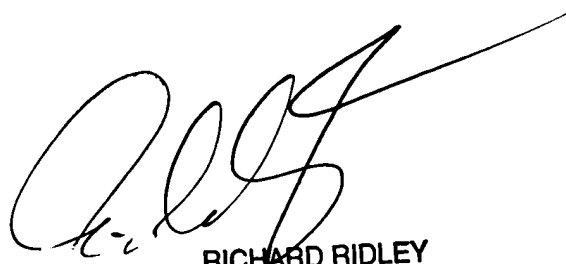
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen Baldwin whose telephone number is 571-272-8973. The examiner can normally be reached on 7:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KB 3/2/2006

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RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER